

EXHIBIT K

PART 1

Town of Clarkstown—Nanuet Transit Oriented Development Zoning

Draft Generic Environmental Impact Statement

Volume 1 – Draft Report

Lead Agency Acceptance Date: October 9, 2018

Date of Public Hearing: November 13, 2018

***Written Comments Will be Accepted by the Lead Agency for
Ten (10) Days After Close of the Public Hearing***

prepared for

Town of Clarkstown, NY

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October 9, 2018

NEW YORK STATE ENVIRONMENTAL QUALITY REVIEW ACT (SEQRA)

**Draft Generic Environmental Impact Statement
(DGEIS)**

FOR

NANUET TRANSIT ORIENTED DEVELOPMENT (TOD) ZONING

Town of Clarkstown, Rockland County, NY

SEQR Classification: Type 1

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1.0 Introduction

The Town of Clarkstown is considering the rezoning of multiple parcels of land in proximity to the Nanuet Train Station (the Project Study Area). The proposed rezoning would support the development of a transit-oriented neighborhood around the public transit station, a key recommendation in the 2009 Town of Clarkstown Comprehensive Plan and 2011 Commercial Corridor Transportation & Land Use Study. The parcels under consideration for rezoning are currently zoned primarily for, and developed with, commercial and light industrial uses. Through the proposed rezoning, the Town of Clarkstown aims to develop a vibrant, walkable, and aesthetically pleasing mixed-use neighborhood that better connects Nanuet's Hamlet Center to surrounding neighborhoods, encourages public transit use, discourages automobile dependency, and provides high-quality, affordable, and sustainable housing especially for young professionals and families, as well as senior citizens wishing to remain in Nanuet.

The Nanuet Transit Oriented Development (TOD) Zoning (the Proposed Action), consists of three new zoning designations and an update to the Nanuet Hamlet Commercial (HC) zoning specifications. The Proposed Action, which is the subject of this Draft Generic Environmental Impact Statement (DGEIS), includes an amendment to the Town's zoning map to create these new zoning districts (Nanuet TOD zones) and revisions to the requirements of the HC zone. The Town Board of the Town of Clarkstown is serving as the Lead Agency for the environmental review in accordance with procedures set forth in the New York State Environmental Quality Review Act (SEQRA).

A Draft Scoping document (Appendix A) for the Proposed Action was presented to the public during a Public Hearing on February 26, 2018, at which time verbal comments were recorded (Appendix B). Written public comment on the Draft Scoping document was accepted until March 2, 2018. Correspondence on the Draft Scoping document can be found in Appendix C. The Final Scoping document (Appendix D) was developed and accepted on April 10, 2018 by the Town of Clarkstown Town Board. This Draft Generic Environmental Impact Statement has been prepared in accordance with the Final Scoping document. It presents and evaluates the potential environmental impacts associated with the Proposed Action and proposed mitigation measures, in accordance with the New York State Environmental Quality Review Act and Part 617 of the implementing regulations.

2.0 Description of Proposed Action

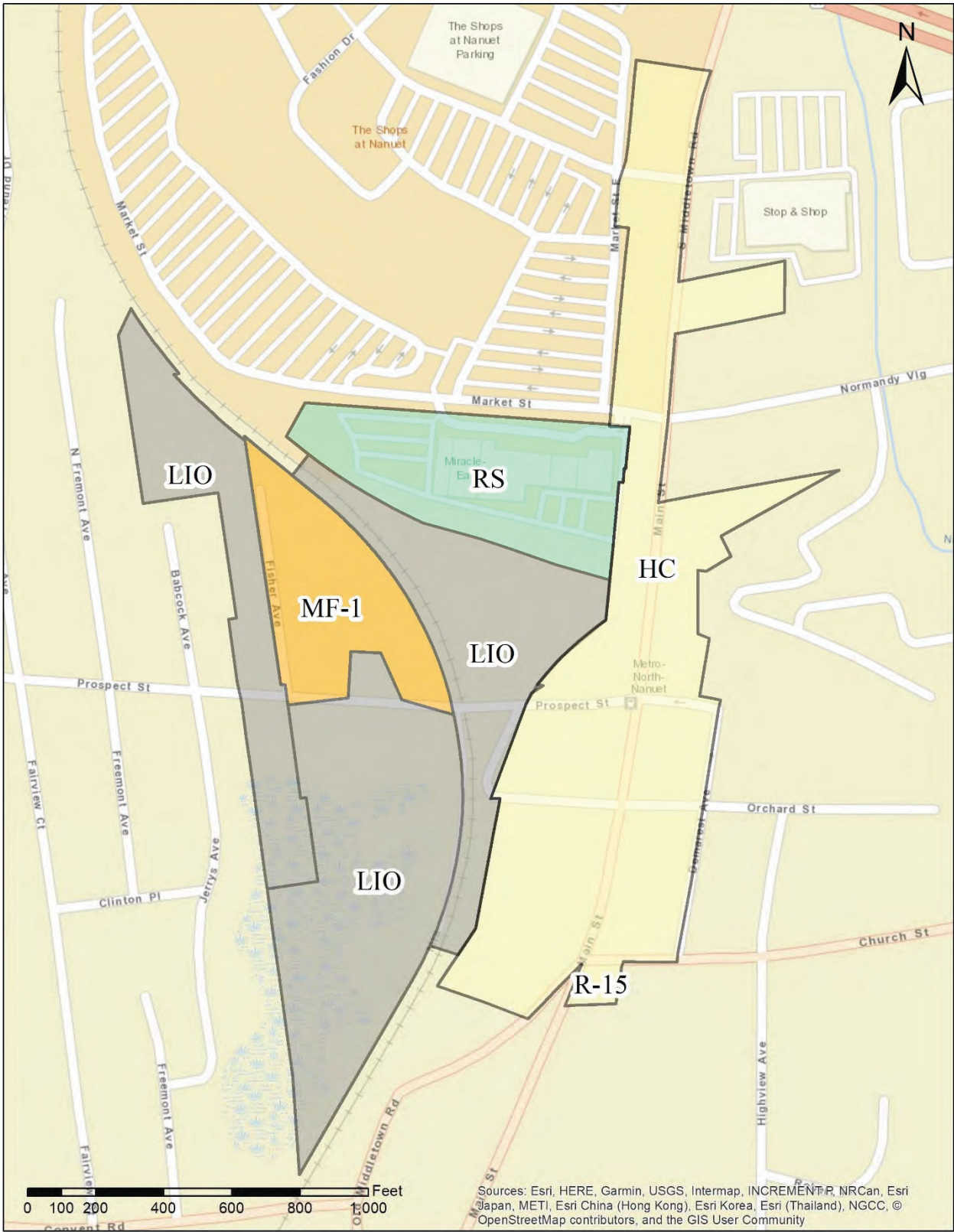
The Town of Clarkstown is seeking to rezone 72 parcels of a total size of approximately 37.11 acres. Currently, these parcels are zoned as Hamlet Commercial (HC), Community Shopping (CS), Light Industrial Office (LIO), Multi-Family 1, and Multi-Family 3 (MF-1 and MF-3). To encourage TOD around the Nanuet Train Station, the Town of Clarkstown is proposing to rezone these parcels into three new zones, as well as update the existing Nanuet HC Zoning District.

2.1 Existing Conditions

Existing Land Use

Figure 1 illustrates the current zoning within the Project Study Area:

Figure 1: Existing Zoning within the Nanuet TOD Proposed Rezoning Area



The existing zoning primarily consists of the following:

HC: Hamlet Commercial

The purpose and intent of the Hamlet Commercial (HC) District is to reinforce and protect the existing historic character of the hamlet by encouraging renovation and new construction, which is in keeping with the local historic scale and character as recommended in the Town Comprehensive Plan. Located in the Town's hamlet center, this district encourages the provision of pedestrian and bicycle amenities as well as apartments over ground floor commercial development.

Centered along Main Street, the HC District is the downtown-style central business district for Nanuet. Unlike the larger regional shops and businesses along Route 59, the HC District contains smaller businesses and shops, and parking behind buildings. A number of these buildings also contain residential units in one or two floors above the ground level. Given its proximity to Route 59 and many strip malls and shopping centers, in its current format, the HC District struggles somewhat to be a truly vibrant and attractive mixed-use or central business district-style neighborhood.

RS: Regional Shopping

The Regional Shopping (RS) District allows a full range of commercial development from convenience to specialty item shopping in a location that is on or immediately adjacent to a major state highway, facilitating regional access.

For the purposes of this study, the RS District consists of the Shops at Nanuet (formerly the Nanuet Mall). This large, open-air shopping center consists of Macys, Sears, a fitness center, movie theater, as well as multiple smaller shops and restaurants. Although the shopping center was recently re-designed from a traditional mall to a Main Street-style outdoor mall, the businesses are still surrounded by expansive parking lots, accessible from South Middletown Road (Main Street) and Route 59.

While the RS District was studied as part of the overall planning process, the Proposed Action does not apply to the Shops at Nanuet.

MF-1: Multi-Family Residential

The Multi-Family (MF-1) District was established to provide additional housing opportunities in attached housing developments. The zone is designed for areas which can provide local services necessary to support relatively intensive housing development compatible with the existing scale of development. As such, these zones are intended to be located in the dense portions of the town's hamlets.

Within the proposed rezoning area, the MF-1 District does not actually contain any residential uses. Instead, this land consists of a vacant light-industrial parcel, and a commuter parking lot owned by Rockland County for the adjacent Nanuet Train Station.

LIO: Light Industrial Office

The purpose of the Light Industrial Office (LIO) District is to allow the development of select industrial uses on land planned and suited to such uses but at the same time protecting the character of the surrounding residential areas or planned residential areas. Manufacturing operations are allowed by right only if they are incidental or accessory to the primary operation of a plant, or allowed as a principal uses by special permit of the Town Board. The LIO district is intended for industrial land uses characterized by minimal land coverage and attractive building designs within industrial park settings featuring wide evergreen buffers to screen adjacent residential areas. The LIO District regulations promote industrial developments using the highest acceptable planning standards to properly handle any obnoxious and objectionable external effects upon the surrounding residential areas, circulation systems, drainage and other natural features.

The LIO District comprises a large portion of the proposed rezoning area. In the western portion of this study area, the LIO District consists of multiple light-industrial facilities, some of which are vacant and underutilized, as well as a few residences on Fisher Avenue. In the eastern portion of this study area, the LIO-zoned area consists of the Nanuet Post Office, a commuter parking lot owned by the Town of Clarkstown adjacent to the Nanuet Train Station platform, and a commuter parking lot owned by Metro-North Railroad behind the post office.

Additional Zoning & Uses

Additional zoning districts in the study area include the Community Shopping (CS), Multi-Family 3 (MF-3), Residential-10 (R-10), and Residential-15 (R-15) zones. However, those parcels comprise only a small portion of the study area.

Maximum Capacity of Current Zoning

The maximum carrying capacity and build-out analysis was conducted utilizing detailed Project Study Area parcel data, not including public right-of-way, inputted into a Microsoft Excel-based model. Analysis of the existing zoning takes into account existing conditions regarding the parcel data, including lot sizes, current uses, and specifications allowed under existing zoning. Analysis of the Proposed Action builds on the existing conditions analysis through the alteration of the zoning regulations.

Based on existing zoning bulk regulations, a maximum build-out of the 72 parcels comprising the Project Study Area would yield the following:

Table 1: Existing Conditions Maximum Carrying Capacity Analysis Results

Zone	Parcel Area (Sq.ft)	Building Floorspace (Sq.ft)
HC	716,274	358,137
LIO	474,495	190,275
MF-1	185,609	92,805
R-15	52,177	12,001
RS	349,986	174,993
Total	1,778,542	828,210

Based on the maximum floorspace that is allowable, if the Project Study Area were to be built out to its fullest potential, the number of residential units allowed would be as follows:

Table 2: Dwelling Units Allowed by Current Zoning

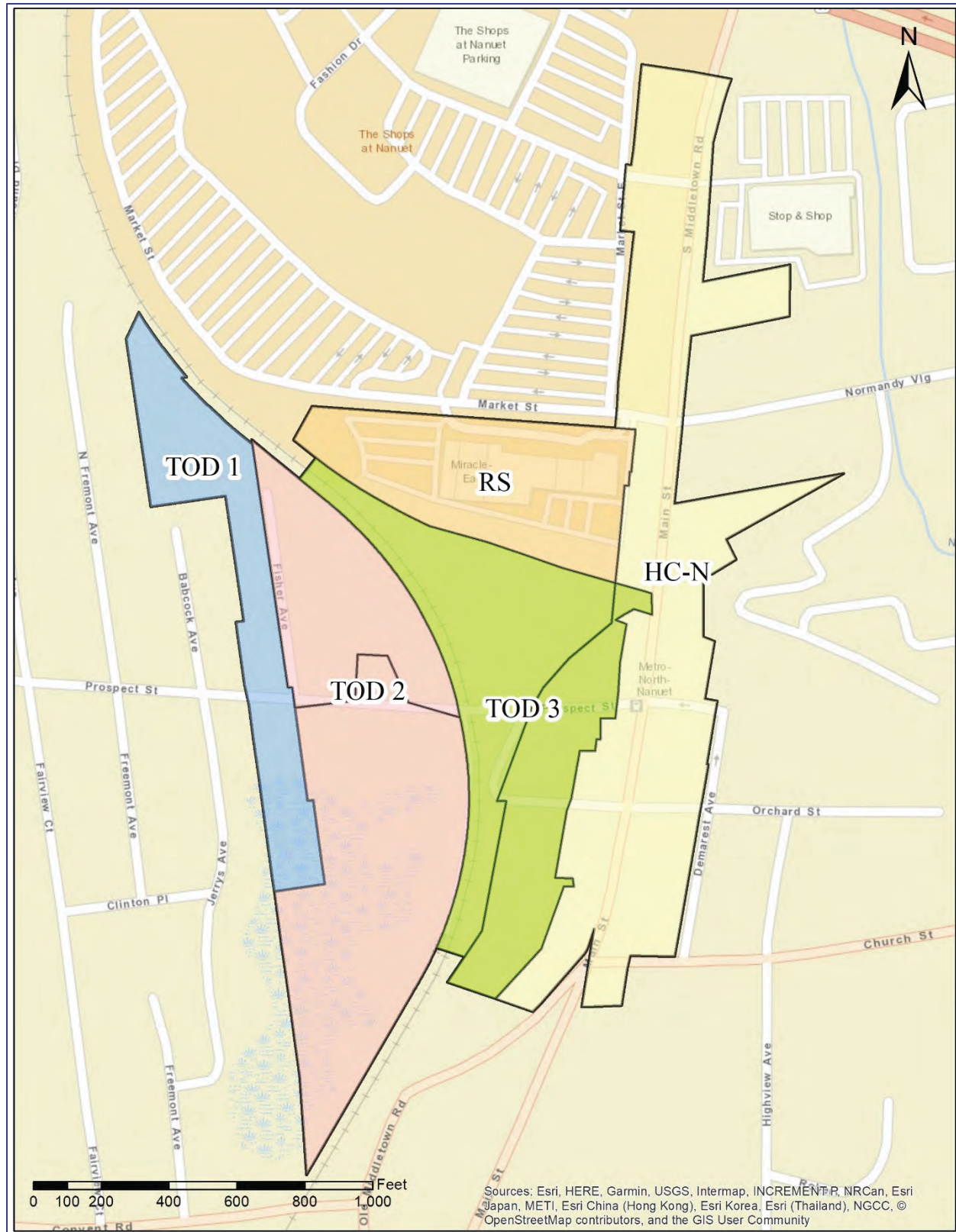
Zone	Number of Dwelling Units
MF-1	93
R-15	12
HC	94
Total	199

A maximum total of 199 residential units could be developed in the study area, pursuant to the current zoning regulations. Out a total building floorspace of 828,210 square feet, it is estimated that 183,765 square feet would be residential, with the remaining 644,445 square feet being commercial space.

2.2 Proposed Land Use

The Town of Clarkstown is proposing to rezone 37.11 acres, comprised of 72 parcels, into three new zones known as TOD Area 1, TOD Area 2, and TOD Area 3. In addition, the Town of Clarkstown is proposing to update bulk and area requirements in the HC zone. Figure 2 illustrates the proposed breakdown of zoning within the Nanuet TOD rezoning area:

Figure 2: Proposed Zoning within the Nanuet TOD Rezoning Area



TOD Area 1

TOD Area 1 is located between Fisher Avenue and Babcock Avenue/Jerrys Avenue and the Metro-North railroad tracks, comprising parcels currently zoned for LIO (Light Industrial/Office). The area is currently occupied by light industrial and commercial uses, as well as single-family homes.

TOD Area 1 will provide a buffer between the single-family residential neighborhoods to the west along Prospect Street, and the denser developments (TOD Areas 2 and 3) closer to the train station. Proposed TOD 1 zoning specifications would allow for 2- and 3-story walk-up residential attached townhouses or condominiums, rising no higher than 35 feet. A total of 20 units per acre would be permitted.

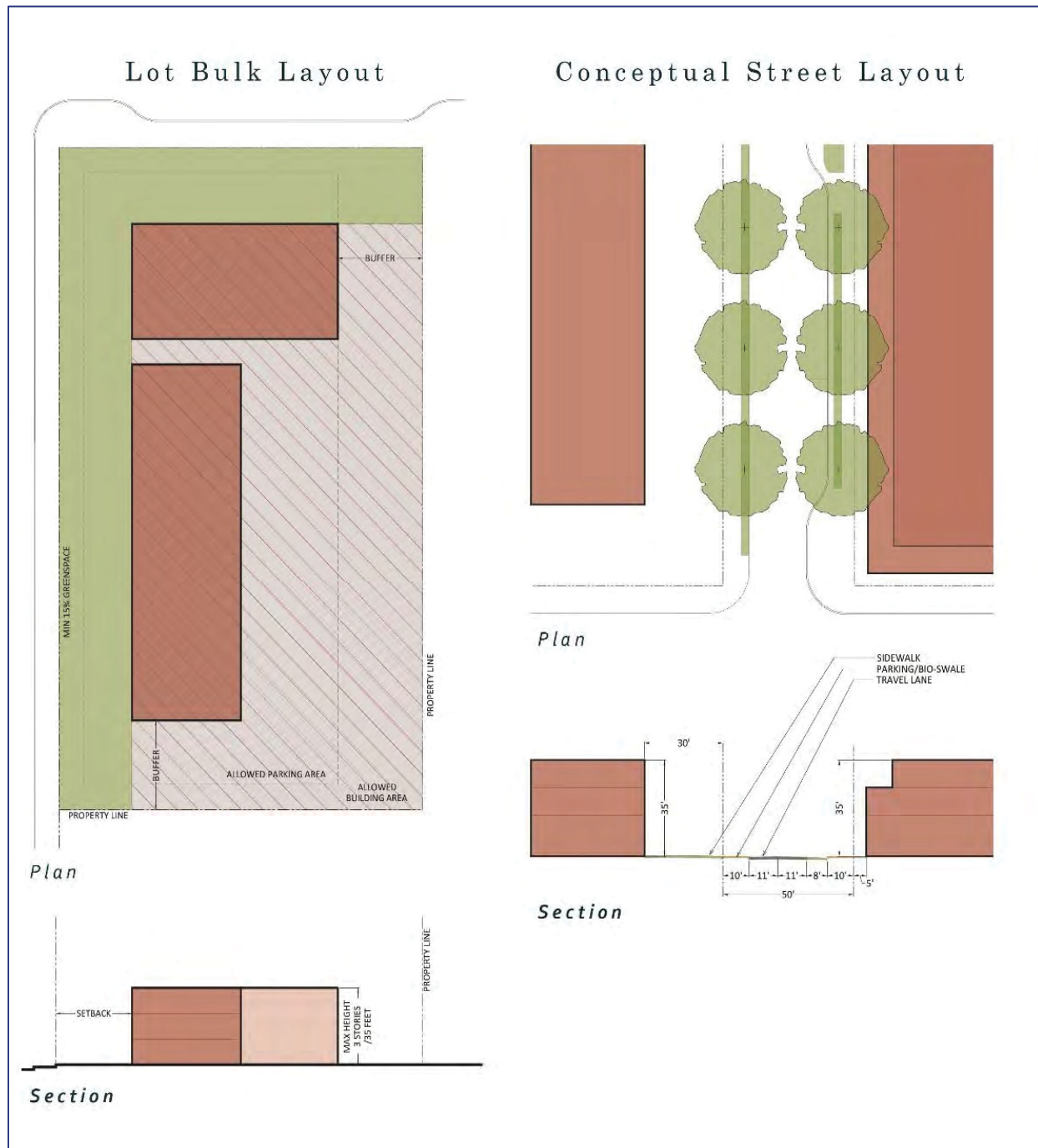
The following table and figure summarize the proposed bulk and area requirements for TOD Area 1:

Table 3: Proposed Area, Bulk and Density Requirements for TOD Area 1

LOT SIZE (min.)	
Lot size	40,000 s.f.
Lot width	150 ft min
BUILDING HEIGHT (max.)	
Principal building	35 ft (3 stories)
Accessory building	1 story
SETBACK – PRIMARY BUILDING	
Front yard	30 ft min
Side yard	n/a
Rear yard	n/a
Frontage build out min %	n/a
Buffer	35 ft buffer when adjacent to a residential zoned district
SETBACK – ACCESSORY BUILDING	
Front yard	30 ft min
Side yard	10 ft min
Rear yard	10 ft min
SETBACK – PARKING	
Front yard	10 ft min
Side yard	0 ft min
Rear yard	35 ft min
LOT DENSITY AND GREENSPACE	
Greenspace % min	25% min
Maximum floor area ratio	.75
Maximum principal building(s) coverage	25.00%
Maximum lot coverage (including principal building(s) coverage)	50%
RESIDENTIAL DENSITY –	
Square feet of land area per unit	7,260
Units per acre	20 max

Units per building	8 max
Bedrooms per unit	1 – 2 bedrooms (maximum of 75% 2 bedroom units)
Unit size	850 – 1,250 sf
Parking requirement	2.0 parking spaces per dwelling unit
COMMERCIAL DENSITY	
Maximum size of 1 st floor commercial	Not permitted

Figure 3: Lot Bulk Layout and Conceptual Street Layout for TOD Area 1



TOD Area 2

TOD Area 2 is located immediately west of the Metro-North Railroad tracks comprising parcels that are currently zoned LIO and MF-1 occupied by vacant parcels previously used for industrial activities, and parking for the Nanuet Train Station.

TOD Area 2 would function as a transition zone between the single-family (West Prospect Street) and townhouse-style residential (TOD 1) neighborhoods to the west, and the proposed higher density mixed-use TOD Area 3 and Hamlet Commercial areas to the east. Zoning specifications would allow for 3- and 4-story residences with 1- and 2-bedroom units, with a maximum height of 45 feet, and setbacks ranging from 5 and 15 feet from the property line and an additional 10 feet from the third floor building façade for the fourth floor of each building. Parcels are required to provide a minimum of 20 percent green space with a maximum density of 40 units per acre. An additional 10 units per acre would be allowed through the inclusion of LEED-certified units and/or streetscape beautification efforts.

As a transition zone between residential and true mixed-use developments to the east, TOD Area 2 would allow for limited (10% of the floor building square footage facing the Nanuet Train Station) ground-level commercial space.

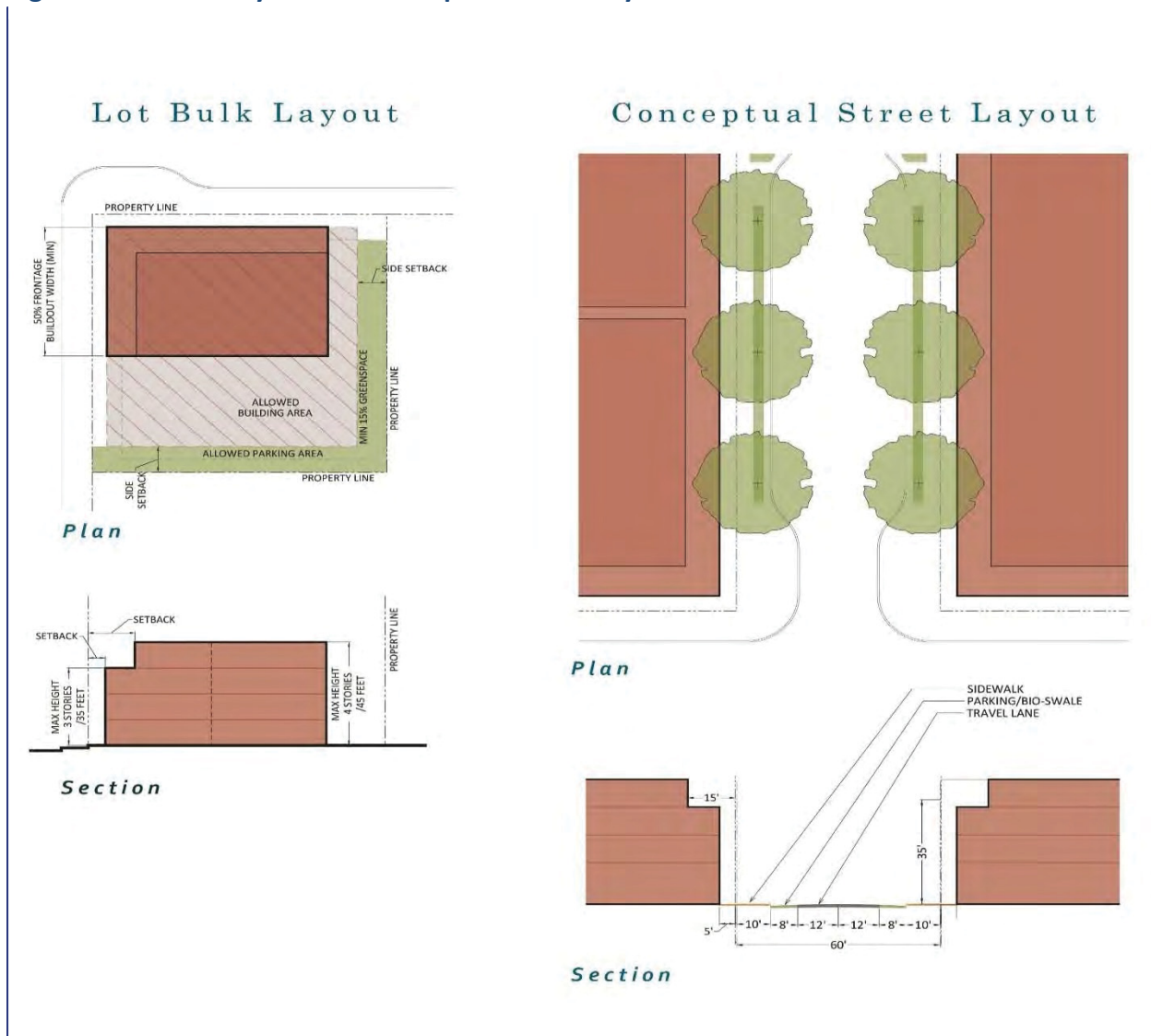
The following table and figure summarize the proposed bulk and area requirements for TOD Area 2:

Table 4: Proposed Area, Bulk and Density Requirements for TOD Area 2

LOT SIZE (min.)	
Lot size	10,000 s.f.
Lot width	60 ft min
BUILDING HEIGHT (max.)	
Principal building	45 ft (4 stories, with 4 th floor setback at least 10 ft from the 3 rd floor building façade when adjacent to a front yard or adjacent to a TOD 1 District)*
Accessory building	1 story
SETBACK – PRIMARY BUILDING	
Front yard	5 ft min – 15 ft max
Side yard	10 ft min
Rear yard	30 ft min
Frontage build out min %	At least 50% between minimum and maximum front setback
Buffer	n/a
SETBACK – ACCESSORY BUILDING	
Front yard	5 ft min
Side yard	10 ft min
Rear yard	10 ft min
SETBACK – PARKING	
Front yard	10 ft min
Side yard	5 ft min
Rear yard	5 ft min

LOT DENSITY AND GREENSPACE	
Greenspace % min	20% min
Maximum floor area ratio	1
RESIDENTIAL DENSITY –	
Square feet of land area per unit	1,452
Units per acre	40 max (potential for up to 50 units per acre with LEED development and Nanuet beautification bonus)
Units per building	n/a
Bedrooms per unit	1 – 2 bedrooms (maximum of 25% 2 bedroom units)
Unit size	800 – 1,000 sf
Parking requirement	1.5 parking spaces per dwelling unit
COMMERCIAL DENSITY	
Maximum size of 1 st floor commercial	10% of the first floor footprint and commercial frontage must face the rail line (parking and residential permitted)
Parking requirement	1 parking space per 300 square feet of retail and service uses 1 parking space per 100 square feet of restaurant uses

Figure 4: Lot Bulk Layout and Conceptual Street Layout for TOD Area 2



TOD Area 3

TOD Area 3 is an area immediately to the east of the Metro-North Railroad tracks and along Orchard Street that is currently zoned HC. The area is currently occupied by light and industrial uses, as well as parking for the Nanuet Train Station and for nearby businesses.

TOD Area 3 is intended to function as a mixed-use commercial area adjacent to the Nanuet Train Station and Hamlet Commercial Zoning District. Zoning specifications would allow for 3- and 4-story mixed-use buildings, consisting primarily of studio and one-bedroom apartments, rising no higher than 45 feet, and including setbacks ranging from 5 and 15 feet from the property line and an additional 10 feet from the third floor building façade for the fourth floor of each building. A total of 40 units per acre would be permitted, with a minimum of 15% green space. An additional 10 units per acre would also be permitted through the inclusion of LEED-certified units and/or streetscape beautification efforts. As a mixed-use commercial area, commercial uses or parking would be required on the first floor of each building.

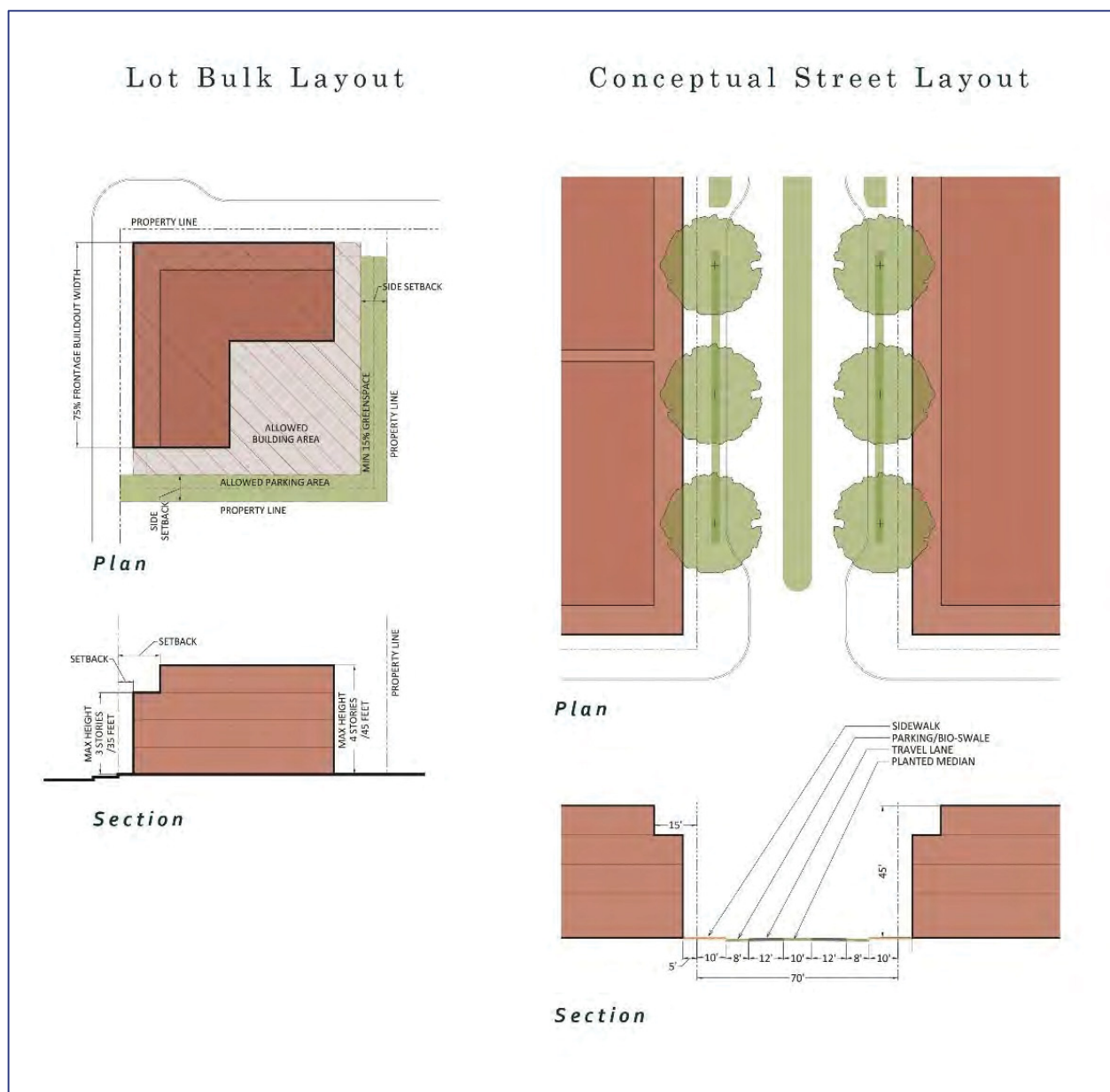
The following table and figure summarize the proposed bulk and area requirements for TOD Area 3:

Table 5: Proposed Area, Bulk and Density Requirements for TOD Area 3

LOT SIZE (min.)	
Lot size	10,000 s.f.
Lot width	60 ft min
BUILDING HEIGHT (max.)	
Principal building	45 ft (4 stories, with 4 th floor setback at least 10 ft from the 3 rd floor building façade when adjacent to a front yard)*
Accessory building	1 story
SETBACK – PRIMARY BUILDING	
Front yard	5 ft min – 15 ft max
Side yard	0 ft min but when provided 15 ft min
Rear yard	25 ft min
Frontage build out min %	At least 75% between minimum and maximum front setback
Buffer	n/a
SETBACK – ACCESSORY BUILDING	
Front yard	n/a
Side yard	10 ft min
Rear yard	10 ft min
SETBACK – PARKING	
Front yard	10 ft min
Side yard	5 ft min
Rear yard	5 ft min
LOT DENSITY AND GREENSPACE	
Greenspace % min	15% min
Maximum floor area ratio	1.5
RESIDENTIAL DENSITY	
Square feet of land area per unit	1,089

Units per acre	40 max (potential for up to 50 units per acre with LEED development and Nanuet beautification bonus)
Units per building	n/a
Bedrooms per unit	Studios and 1 bedrooms
Unit size	500 – 850 sf
Parking requirement	1.5 parking spaces per dwelling unit
COMMERCIAL DENSITY	
Maximum size of 1 st floor commercial	100% (parking permitted and no residential)
Parking requirement	1 parking space per 300 square feet of retail and service uses 1 parking space per 100 square feet of restaurant uses

Figure 5: Bulk Layout and Conceptual Street Layout for TOD Area 3



Hamlet Commercial – Nanuet

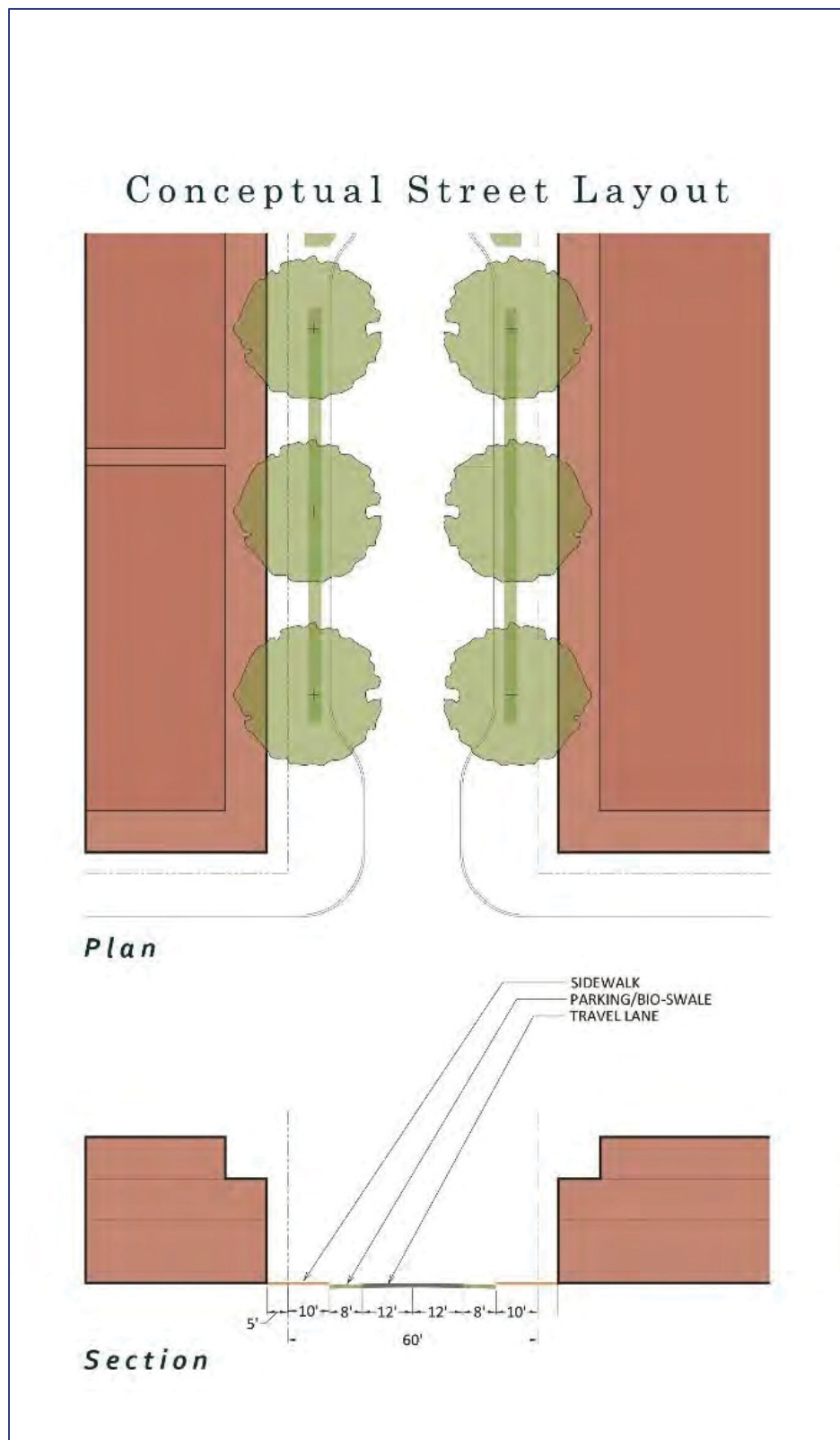
Hamlet Commercial – Nanuet (HC-N) is an area along Main Street (Middletown Road). The area is occupied by mixed-use ‘downtown’ commercial uses with residential on the second and third floors. Under the proposed rezoning, HC-N zoning specifications would increase the maximum building heights from 28 feet to 35 feet, matching those of the other TOD areas, and increase the residential density from 8 to 16 units per acre.

The following table and figure summarize the proposed bulk and area requirements for Hamlet Commercial - Nanuet:

Table 6: Proposed Area, Bulk and Density Requirements for Hamlet Commercial – Nanuet

LOT SIZE (min.)	
Lot size	8,000 s.f.
Lot width	50 ft min
BUILDING HEIGHT (max.)	
Principal building	35 ft (3 Stories)
Accessory building	n/a
SETBACK – PRIMARY BUILDING	
Front yard	0 ft min – 15 ft max
Side yard	0 ft or 15 ft adj commercial / 25 ft min adj residential
Rear yard	25 ft min
Frontage build out min %	At least 75% between minimum and maximum front setback
Buffer	n/a
SETBACK – ACCESSORY BUILDING	
Front yard	n/a
Side yard	10 ft min
Rear yard	10 ft min
SETBACK – PARKING	
Front yard	n/a
Side yard	5 ft min
Rear yard	5 ft min
LOT DENSITY AND GREENSPACE	
Greenspace % min	15% min
Maximum floor area ratio	1.5
RESIDENTIAL DENSITY –	
Square feet of land area per unit	2,723
Units per acre	16 max
Bedrooms per unit	Studios, 1, and 2 bedrooms (maximum of 25% 2 bedroom units)
Unit size	500 – 1,000 sf
Parking requirements	1.5 parking space per dwelling unit
COMMERCIAL DENSITY	
Maximum size of 1 st floor commercial	100% (no parking permitted)
2 nd and 3 rd floor commercial	Any combination of commercial and residential uses is permitted
Parking requirement	1 parking space per 300 square feet of retail and service uses 1 parking space per 100 square feet of restaurant uses

Figure 6: Conceptual Street Layout for Hamlet Commercial – Nanuet



Maximum Capacity of Proposed Zoning

Based on the proposed zoning specifications, a build-out analysis was conducted for the four proposed zoning districts (TOD 1, TOD 2, TOD 3, and HC-N). It should be noted that the extent of the area remained the same between the existing and proposed zoning district scenarios.

The result of the maximum carrying capacity analysis is shown in Table 7 by zone and broken down by residential and commercial floorspace. As Table 7 depicts, potential maximum floorspace for residential use in the 3 TOD areas is equally distributed at about 150,000 feet per zone. While potential maximum residential floorspace is significantly higher within the HC-N zone, much of it consists of existing commercial and mixed-use residential/commercial land uses. Potential maximum floorspace of commercial land uses is primarily concentrated in TOD 3 at approximately 244,000 square feet. In total, approximately 30% of the total floorspace is zoned for commercial.

Table 7: Maximum Floorspace by Proposed Action Zoning Districts

Zoning/Area	Maximum Build-Out Floorspace By Zone (square footage)		
	Residential	Commercial	Total Floorspace
TOD 1	152,627	-	152,627
TOD 2	149,413	13,583	162,996
TOD 3	149,331	244,153	393,484
HC-N	501,604	155,041	656,646
Total Floor Area	952,975	412,777	1,365,753

Table 8 summarizes the maximum number of allowed residential units by zone for the proposed action as compared to the dwelling units allowed by current zoning. Using the proposed area, bulk and density regulations, the proposed TOD 1 zoning district would be able to construct a maximum of 116 residential units; the proposed TOD 2 zoning district would be able to construct 150 units; the proposed TOD 3 zoning district would be able to construct 299 units; and as a result of the height allowance increase of 28 feet to 35 feet and residential density increase of 8 to 16 units per acre, the proposed HC-N zoning district would be permitted to construct a total of 194 units. The maximum allowed number of units within the study area of 759 represents an additional 560 possible units from what is allowed under current zoning regulations.

Table 8: Maximum Number of Dwelling Units by Proposed Action

Zone	Dwelling Units Allowed by Current Zoning	Number of Additional Dwelling Units	Maximum Number of Dwelling Units
TOD 1	12	104	116
TOD 2	93	57	150
TOD 3	0	299	299
HC-N	94	100	194
Total	199	560	759

Table 9 summarizes a comparison of the maximum build-out of commercial and residential uses under existing zoning and the zoning of the Proposed Action.

Table 9: Comparison of Build-Out Floor Space

Build-Out Floorspace by Scenario (square footage)			
	<i>Max Build-Out Existing Zoning</i>	<i>Proposed Action</i>	<i>Difference (+/-)</i>
Commercial	644,445	412,777	-231,668
Residential	183,765	952,975	769,210
Total	828,210	1,365,752	537,542

At full build-out, implementation of the Proposed Action could result in an increase in population of 1,226 new residents, which would represent a 6.7% increase above the total population of the Hamlet of Nanuet at 18,377 residents and 1.41% increase for the Town of Clarkstown population of 86,897 residents.

3.0 Impact to Community Services

Chapter 3 addresses potential impacts resulting from the Proposed Action and the corresponding maximum buildout, to community facilities and services including police protection services, fire protection services, emergency medical services and schools.

3.1 Police, Fire, and Emergency Services

Existing Conditions

Town of Clarkstown Police Department

The Town of Clarkstown Police Department serves the residents of New City, Congers, Valley Cottage, Rockland Lake, Upper Nyack, Nyack, Central Nyack, West Nyack, Nanuet, Spring Valley, and Bardonia, making it the largest town police force in New York State. The Clarkstown Police Department comprises multiple divisions including: Detective's Bureau, Juvenile Aid Bureau, K-9 Unit, Street Crimes Unit, Strategic Intelligence Unit, Warrant Squad, Critical Incident Response Team, and Emergency Management Office.

According to the Clarkstown Police 2016 Annual Report, 156 sworn officers and 70 civilians and crossing guards provide patrol and protection services to the Town's 86,897 residents. Given the total of 156 officers for 86,897 residents, the Town of Clarkstown maintains a ratio of 1 officer for every 557 residents.

The officers are split into six patrol squads, with three larger squads staffing the day and evening shifts and 3 smaller squads staffing the overnight shift. All six squads are under the command of a Squad Lieutenant at all times. In 2016, the Clarkstown Police Department handled 54,458 calls for service. According to the Clarkstown Police 2016 Annual Report, this service call number is under reported, as many of their interactions with the public and services they perform on a routine basis do not generate a call and are therefore not "counted" towards their total calls for service.

According to the Town of Clarkstown's 2018 Adopted Budget, the Clarkstown Police Department budget was \$31,857,265 for the 2018 calendar year.

Nanuet Fire Department

The Nanuet Fire Department staffs eleven line officers and eight company officers, all of whom are volunteers. These officers make up 22% of the 87 active members of the Nanuet Fire Engine Company. Because their staff comprises only volunteers, staffing levels vary day-to-day. Given a population of 18,377 for the Hamlet of Nanuet, this equates to one fire department personnel for every 224 residents. The Department serves the residents of Nanuet and Bardonia and is equipped with a fleet of ten emergency vehicles that are used for firefighting, patrol, and support. The Nanuet Fire Department has two stations: a main headquarters in Nanuet and a substation in Bardonia. The Bardonia substation was constructed in the northeastern portion

of the District to adequately provide protection to Nanuet Fire Department's large district. From 2013-2017, the Department responded to an average of 620 calls per year, with a peak of 679 calls in 2015. The response time to these calls varies based on the time of the call, but can be estimated to be between 3 and 20 minutes.

Nanuet Emergency Medical Services/Nanuet Community Ambulance Corporation

The Nanuet Emergency Medical Services (EMS) is the primary 911 emergency medical provider for Nanuet, West Nyack, Bardonia, Spring Valley, and parts of New City. The Clarkstown Police Department dispatches the all-volunteer EMS staff, which comprises seven operational officers and three administrative officers; equating to a ratio of one ambulatory personnel for every 9,192 residents (based on the Nanuet EMS service area).

Nanuet EMS is equipped with four ambulance trucks to serve their local community. In some instances, mutual aid is provided by nearby emergency service stations, such as the Rockland Paramedic Services, the Nanuet Fire Department, and the Clarkstown Police Department. In 2017, Nanuet EMS responded to 2,797 incidents, an increase of 596 incidents since 2007.

Under current zoning, the Project Study Area could be developed to a maximum of 828,210 gross floor area, including a total of 199 residential units. It is anticipated emergency services providers would adjust staffing levels, rolling stock, and equipment to address changes in conditions that may occur within the Project Study Area. Notwithstanding increases in annual budget and capital costs, which would be accommodated in the Town's Capital Improvement Plan, no changes to the emergency service providers are anticipated in the future.

Potential Impacts

Town of Clarkstown Police Department

Because the Proposed Action and development of the Project Study Area would result in additional residential and commercial uses, it is anticipated that police service demands would increase from current demand. At full build-out, implementation of the Proposed Action could result in an increase in population of 1,226 new residents, which would represent a 6.7% increase above the total population of the Hamlet of Nanuet and 1.41% for the Town of Clarkstown, which is a *de minimis* population increase that could be accommodated by the Town of Clarkstown Police Department.

Planning standards contained in the Development Impact Assessment Handbook, published by the Urban Land Institute (ULI), recommend a service ratio of two police per 1,000 residents. Given the potential for 1,226 additional residents at full build-out, the proportion of officers to residents could decrease from 1:557 (2:1,114) to 1:565 (2:1,130). The Town of Clarkstown Police Department would likely be able to accommodate this potential small increase in demand.

Nanuet Fire Department

The Proposed Action would allow for the development of additional residential units and commercial/retail establishments within the Project Study Area and as such, would be anticipated to increase demand for fire protection services. Any new development in the Project Study Area would be designed in accordance with all applicable New York State Building and Fire Codes – and where appropriate, would be sprinklered. The maximum height of development under the Proposed TOD 2 and 3 Zones would be 4 stories.

ULI recommends a ratio of 1.65 fire department personnel per 1,000 people. Given the potential for 1,226 additional residents at full build-out, the proportion of fire department personnel to Nanuet residents would decrease from 1:224 to 1:239. This proportion is well within the standards set forth by ULI. Therefore, it is anticipated the Nanuet Fire Department would be able to accommodate any increase in demand, and therefore no significant adverse impacts to the Nanuet Fire Department are anticipated to result from the proposed rezoning.

Nanuet Emergency Medical Services/Nanuet Community Ambulance Corporation

At full build-out, implementation of the Proposed Zoning could result in an increase of 1,226 new residents, representing a 1.41% increase in the population of the Town of Clarkstown and 6.7% to the Hamlet of Nanuet. This minimal population growth would be expected to add 187 calls annually.

ULI recommends a ratio of 4.1 EMS personnel per 30,000 people. Given the potential for 1,226 additional residents at full build-out, the proportion of EMS personnel to Nanuet EMS service area residents would decrease from 1:9,192 to 1:9,315. Given that the population increase is considered *de minimis*, the Nanuet EMS is likely able to handle such an increase. As such, the amount of additional Nanuet EMS personnel required to bring the Nanuet EMS service area to a ratio of 4.1 personnel per 30,000 population would still remain at 2. Therefore, the adoption of the TOD Zoning is not anticipated to have a significant adverse impact on the provision of emergency medical services.

Proposed Mitigation

The Proposed Action is not anticipated to result in any significant adverse impacts to emergency service providers. Although the proposed rezoning would result in an increase in residents and commercial development, property tax revenue generated by the development would be expected to offset any additional costs to the relevant taxing jurisdictions. Based on a combine non-homestead tax rate for Town and County taxes of \$48.83 per square foot of assessed value, which includes all special districts and excludes property taxes for the school district and library, the proposed action would generate approximately \$749,256.88 in additional tax revenues; as compared to a maximum build-out under existing zoning scenario.

Moving forward, it is recommended that a separate analysis be conducted for each individual parcel given that the Proposed Action broadly corresponds to a large number of parcels that may be assessed and taxed in varying methods.

3.2 Schools

Existing Conditions

Public Education – Nanuet Union Free School District

Enrollment:

The Project Study Area is located within the Nanuet Union Free School District (NUFSD). This District contains two elementary schools, one 5-6 Academy of Excellence, one middle school and one high school and had a total enrollment of 2,189 students in the 2016-2017 school year (Tables 10 and 11). According to the Nanuet UFSD School Report Card Data 2016-2017, the Nanuet School District had a student enrollment of 2,189 in the 2016-2017 school year, which is down from a peak of 2,314 students in the 2006-2007 school year.

Table 10: 2013-2017 Annual Enrollment: Nanuet Union Free School District

Enrollment 2013-2014	Enrollment 2014-2015	Enrollment 2015-2016	Enrollment 2016-2017
2,244	2,207	2,184	2,189
Source: Nanuet Union Free School District			

Table 11: 2016-2017 Student Enrollment per Grade: Nanuet Union Free School District

Group	Total Students
Pre-K (Half Day)	42
K (Full Day)	142
1st Grade	131
2nd Grade	154
3rd Grade	162
4th Grade	180
5th Grade	177
6th Grade	168
7th Grade	169
8th Grade	185
9th Grade	169
10th Grade	192
11th Grade	173
12th Grade	173
Source: Nanuet Union Free School District	

Budget:

The NUFSD school budget increased by approximately 3% since the 2016-2017 school year with an increase of 1.5% between 2016-2017 and 2017-2018, and an increase of 1.7% between 2017-2018 and 2018-2019 (see Table 12), while District enrollment has slightly decreased. In the 2016-2017 school year, District spending per student was \$28,240, and can be assumed to have increased over the 2017-2018 and 2018-2019 school years. The budget increase can be explained by an increase in expenditures for the Board of Education, staff, central services, contractual expenses, administration and improvement, instruction, pupil services, pupil transportation, and employee benefits (Table 13). This budget enables the school district to provide services to students and faculty. Increases in per pupil costs have been accommodated through increased state aid and property tax levy, as shown in Table 14.

Table 12: 2016-2019 General Budget: Nanuet Union Free School District

Year	2016-2017 (\$)	2017-2018 (\$)	2018-2019 (\$)
General Fund Budget	70,919,121	71,967,897	73,216,050
Source: Nanuet Union Free School District			

Table 13: 2017-2019 Expenditure Summary: Nanuet Union Free School District

	2017-2018 Budget (\$)	2018-2019 Budget (\$)	Change (\$)	% Change
Board of Education	145,708	147,275	1,567	1.08%
Central Administration	1,066,956	963,632	-103,324	-9.68%
Staff	571,057	626,412	55,355	9.69%
Central Services	5,642,077	5,884,772	242,695	4.30%
Contractual Expenses	698,053	758,905	60,852	8.72%
Administration & Improvement	2,114,670	2,325,382	210,712	9.96%
Instruction	28,553,851	29,261,873	708,022	2.48%
Instructional Media	2,740,369	2,599,499	-140,870	-5.14%
Pupil Services	3,015,057	3,154,797	139,740	4.63%
Pupil Transportation	2,570,896	2,709,753	138,857	5.40%
Employee Benefits	17,018,738	17,654,328	635,590	3.73%
Debt Service	17,500	17,500	0	0.00%
Interfund Transfers	7,812,965	7,111,922	-701,043	-8.97%
Source: Nanuet Union Free School District				

Table 14: 2017-2019 Revenue Summary: Nanuet Union Free School District

	2017-2018 (\$)	2018-2019 (\$)
State Aid	8,223,829	8,972,613
Federal Aid	0	0
Tuition¹	160,000	160,000
Other Sources²	9,220,760	8,691,215
Tax Levy³	54,363,308	55,392,222
TOTAL	71,967,897	73,216,050
Notes:		
¹ Includes tuition from other districts for students attending NUFSD schools.		
² Includes income from PILOT payments, Continuing Education, Summer Enrichment, health services, interest on investments, Appropriated Fund Balance, refund of prior year expenses, etc.		
³ Amount to be collected from property and business owners after all other revenue sources are calculated.		
Source: Nanuet Union Free School District		

Cornell University's Program on Applied Demographics (PAD)¹ is home to one of the U.S. Census Research Data Centers (RDC) nationwide, and brings skills in demographics, economics, statistics, data gathering and data analysis together to provide a variety of organizations with data, information and advice, including the New York State Department of Labor and the U.S. Census Bureau. According to Cornell University's PAD, total enrollment at the Nanuet Union Free School District (NUFSD) is expected to decline to 1,860 students by the 2026-2027 school year. This decline in enrollment may be attributed to an aging population in the Hamlet of Nanuet as supported by the American Community Survey findings that as of 2016, 48% of Nanuet's population was 45 or older.

In the future, without the Proposed Action, minimal additional residential development is expected to occur within the Project Study Area. Any increase in cost to the District to educate school-aged children, would be offset by property tax revenue generated by the additional development. To ensure sufficient offsets, each proposed development project should be required to conduct a fiscal impact analysis concurrent with site plan review.

Potential Impacts

Public Education – Nanuet Union Free School District

As shown in Tables 15 and 16, the Proposed Action would result between 52 to 127 new school age children who would be expected to enroll in the Nanuet Union Free School District. These estimates are based on the Rutgers University Center for Urban Policy Research (CUPR) Residential Demographic Multipliers, June 2006, which are widely accepted as industry standard multipliers. Because full build out under the Proposed Action is anticipated to occur in 2030, it is difficult to accurately predict the types of units, rental or ownership costs, etc. and therefore this analysis provides a range of potential Project-generated school aged children. More specifically, Tables 15 and 16 provide Project-generated school aged children using a total

¹ Conducted in cooperation with the NYS Center for Rural Schools (<https://pad.human.cornell.edu/index.cfm>)

PSAC value that calculated the total number of children added across all new units (Table 15) and a PSAC value based on rental rates for the proposed residential units (Table 16).

Table 15: Proposed Action-Generated School Age Children – Based on Estimated Total New Children

Unit Type	No. Proposed	Multiplier (total PSAC – All Values) ¹	Projected Students
Studio	257	0	0
1 bedroom	316	0.15	47
2 bedroom	186	0.43	80
Total	759	--	127
Notes:			
1. PSAC – Public School Aged Children			
Sources: Rutgers University Center for Urban Policy Research			

Table 16: Proposed Action Generated School Age Children – Based on Rental Rates

Unit Type	No. Proposed	Multiplier (total PSAC) ^{1/2}	Projected Students
Studio	257	0	0
1 bedroom	316	0.07	22
2 bedroom	186	0.16	30
Total	759	--	52
Notes:			
1. PSAC – Public School Aged Children			
2. CUPR rates - 5+ Units- Rent, 1BR values from units at more than \$1000/month, 5+ Units-Rent, 2BR values from units at more than \$1100/month			
Sources: Rutgers University Center for Urban Policy Research			

As discussed above, the Cornell University Program on Applied Demographics has projected student enrollment for the Nanuet Union Free School District through the 2026-2027 school year and according to their projections, enrollment is expected to decrease to 1,860 students by the 2026-2027 school year. The additional students generated by the Proposed Action would bring the total enrollment in the 2026-2027 school year to between 1,912-1,987, which represents a decrease from the peak enrollment of 2,314 students in the 2006-2007 school year and less than current enrollment of 2,189. The anticipated full project build out is projected to be 2030. Because school enrollment is projected to decline by almost 18 % over the next decade, the NUFSD would be able to accommodate the additional 52-127 school aged children projected to be generated as a result of the proposed action.

Proposed Mitigation

The additional 52-127 students in the Nanuet Union Free School District resulting from the development are not anticipated to create a significant adverse impact on the district. Assuming the 52-127 students would be distributed among K-12 grade levels, approximately 3 to 10 students would be added per grade. Utilizing the NUFSD's 2016-2017 assessment of District costs of \$28,240 per student, the Proposed Action would require an additional

\$1,468,480-\$3,586,480 in costs for District student spending; if added to the current enrollment of 2,189 students. However, the projected decline in school aged children in the NUFSD would naturally offset, in excess, the additional costs associated with the Proposed Action.

Additionally, when compared to the maximum build-out under existing zoning versus the Proposed Action's zoning, the Proposed Action would increase ratables and generate approximately an additional \$1,574,363.78 in School and Library taxes. This calculation was determined by using the combined non-homestead tax rate for School and Library taxes of \$106.83 per square foot of assessed value for commercial and residential parcels within the study area. The combined effect of an overall decrease in student enrollment over the next decade and increased tax revenues generated as a result of the Proposed Action may actually result in a surplus in school funding, if all spending remains constant.

Because the increase in school aged students is less than the peak enrollment of the District, it is anticipated that NUFSD could accommodate additional school-age children generated by the proposed action. Therefore, no significant adverse impacts to the school district are anticipated as a result of the Proposed Action, and no mitigation measures are anticipated to be required. Moving forward however, it is recommended that a separate analysis be conducted for each individual parcel given that the Proposed Action broadly corresponds to a large number of parcels that may be assessed and taxed in varying methods.

3.3 Solid Waste

Existing Conditions

The Town of Clarkstown, in conjunction with the Rockland County Solid Waste Management Authority (RCSWMA), provides solid waste management services to the Project Study Area. Solid waste is collected by the Town of Clarkstown and processed at facilities owned by the RCSWMA. Rockland County's solid waste disposal system consists of 3 transfer stations – Bowline, Clarkstown and Hillburn.

Non-recyclable municipal solid waste from residences, businesses and government buildings in Clarkstown and Orangetown is collected by the Town of Clarkstown or private haulers and transported to the Clarkstown transfer station. The facility has a permitted capacity of 288,800 tons per year and total municipal solid waste received in 2010 was 141,732 tons.

All recyclables (mixed paper, cardboard, glass, aluminum & plastic containers) separated from municipal solid waste collected from Rockland County is delivered to the Materials Recovery Facility (MRF) located in Hillburn, NY. The MRF operates as a dual stream system for both comingled containers and mixed clean paper. The facility has maximum capacity of 76,960 tons per year. Total recyclables received in 2010 was 32,120 tons.²

There are no publicly available plans for future changes to solid waste or recycling collection services. In the Future without the Proposed Action, it is expected the Project Study Area

² Source: Rockland County Solid Waste Management Plan

would continue to generate similar levels of solid waste and recycling as at present. Solid waste and recycling services would continue to be provided by Town in conjunction with the RCSWMA.

Potential Impacts

Solid waste generation rates for residential and commercial uses, which include both 'garbage' and 'recycling,' were sourced from the New York City Environmental Quality Review (CEQR) Technical Manual. It is estimated that, at full build out, the residential components of the Proposed Action would be expected to generate approximately 1,128 tons of solid waste per year, including recycling, as shown in Table 17.

Table 17: Nanuet TOD Estimated Solid Waste Generation

Use	Generation rate (pounds per week)	Number of residents	Estimated solid waste generation lbs/week	Estimated solid waste generation tons/year
Residential (multi-family and academic housing) (per resident)	17	1,226	20,842	542
Commercial – General Retails	79 per Employee	285	22,515	586
Total				1,128
Note: 1. Number of residents are estimated based on proposed number of apartment units 2. Number of commercial – General retails employees are estimated based on U.S. EIA utilization rates – Table B2, Mercantile- Retail other than mall (412,777SF retail area divided by 1,450 SF per worker)				
Source: 2014 City Environmental Quality Review (CEQR) Technical Manual. U.S. Energy Information Administration https://www.eia.gov/consumption/commercial/data/2012/bc/cfm/b2.php				

It is anticipated the Clarkstown and Hillburn facilities would have sufficient capacity to accommodate waste and recycling generated by the Proposed Action at full build out as the available capacity at each facility exceeds the total anticipated solid waste generation for the Project Study Area.

Per the Rockland County Solid Waste Management Plan (RCSWMP) dated December 2011, last revised September 2014, the Clarkstown Transfer Station has a permitted capacity of 288,800 tons per year and total municipal solid waste received in 2010 was 141,732 tons, resulting in an available capacity of 147,068 tons per year. Per the RCSWMP, the Hillburn MRF has a maximum capacity of 76,960 tons per year and total recyclables received in 2010 was 32,120 tons, resulting in an available capacity of 44,840 tons per year. The available capacity of each facility well exceeds the total anticipated solid waste generation for the Project Study Area.

Proposed Mitigation

The Proposed Action is not anticipated to result in a significant adverse impact on the collection and transport of solid waste as the appropriate waste transfer facilities have the capacity to serve the Proposed Action. Based on information presented in the RCSWMP, the Clarkstown Transfer Station and Hillburn MRF have sufficient capacity to receive the additional solid waste from the Project Study Area at full build-out.

4.0 Impact to Infrastructure

Chapter 4 analyzes potential stormwater runoff impacts resulting from the Proposed Action and development at full build-out. The Proposed Action establishes minimum greenspace requirements for the redevelopment of each parcel within the Proposed TOD zones. In general, implementation of the Proposed Action, would result in an increase in total impervious surfaces within the Project Study Area.

It is anticipated that impacts to water quality and peak flow rate of runoff, as a result of the impervious surface increase, would be mitigated through the implementation of stormwater management practices for each project within the TOD. This section analyzes the potential impacts associated with total stormwater runoff volumes generated by an overall increase in impervious surfaces for the maximum development scenario (full build-out) within the TOD.

4.1 Drainage/Flooding (Stormwater)

Existing Conditions

Based on existing topographic information from New York State GIS clearinghouse, the majority of the TOD watershed drains to a 5.9 acre United States Fish and Wildlife Service National Wetlands Inventory- (USFWS NWI-) mapped wetland, roughly bounded by Convent Road to the south, Fremont Ave & Jerrys Ave to the west, Prospect Street to the north and the railroad tracks to the east. The wetland is a “palustrine forested seasonally flooded” wetland that discharges southwards to a culvert under Convent Road and is tributary to the Muddy Brook.

The drainage area to the Army Corps of Engineers (ACOE) wetland southwest of the Nanuet Train Station is approximately 40% impervious coverage under existing conditions. Refer to the Existing Conditions Drainage Area Map in the Stormwater Runoff Volume Analysis memorandum in Appendix E.

Existing catch basins and storm drainage piping are located throughout the Project Study Area and are assumed to drain to the above-referenced wetland located southwest of the Nanuet Train Station. Conveyance capacity of the existing drainage system has not been analyzed as part of this GEIS.

Based on available aerial imagery, the project study area has not been substantially redeveloped since the issuance of the most recent NYSDEC General Permit for Stormwater Discharges from Construction Activity (CGP) dated January 29, 2015 and the most recent NYS Stormwater Management Design Manual (NYSSMDM) dated January 2015. The majority of existing developments within the Project Study Area would likely not comply with the current technical standards in the CGP and NYSSMDM. The Town of Clarkstown Code, Section 249A-26(C)(3), was amended on August 20, 2013 to require inclusion of water quantity and water quality controls for projects disturbing more than 10,000 square feet. Based on available aerial imagery, the Project Study Area has not been substantially redeveloped since the amendment

to the local law in 2013. As such, it is unlikely that stormwater management practices for water quantity and water quality control are present at parcels within the Project Study Area.

At present, stormwater runoff from the project study area enters the municipal storm drainage system, likely un-detained and untreated, before discharging to surface waters. In the future without the Proposed Action, stormwater runoff would continue to enter the municipal drainage system un-detained and untreated.

Potential Impacts

At full project buildout, if each parcel within the project study area maximizes impervious area to the extent allowed by the Proposed TOD Zoning, the total impervious area within the TOD would increase by 3.198 acres to a total of 21.047 acres (which is 82% of the Project Study Area). Table 18 presents a comparison of existing and proposed (i.e. max build) impervious coverage within the Project Study Area.

Table 18: Impervious Surface Area by TOD Zone

	TOD1		TOD2		TOD3		HC	
Greenspace % Min.	25%		20%		15%		15%	
	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed
Impervious	2.946	4.377	3.313	3.210	6.116	6.398	5.474	7.062
Pervious	2.890	1.459	0.700	0.803	1.412	1.129	2.834	1.246
Total	5.836	5.836	4.013	4.013	7.528	7.528	8.308	8.308

For any project with greater than 1 acre of disturbance, the CGP requires the implementation of stormwater management practices designed in accordance with the NYSSMDM. The general permit also requires coverage for projects under 1 acre of disturbance that are considered part of a "Larger Common Plan of Development." Additionally, Section 249A-26(C)(3) of the Town of Clarkstown Town Code, requires that any land development activity disturbing more than 10,000 square feet include water quantity and quality controls.

The NYSSMDM requires implementation of stormwater management practices that provide stormwater quality treatment and stormwater quality control of peak runoff rates for the 1, 10, and 100 year, 24-hour storm events. As the redevelopment of each parcel will require conformance to the NYSSMDM, no adverse impacts to stormwater quality or peak rates of runoff are anticipated as a result of the Proposed Action.

An overall increase of 18% in impervious area in the Project Study Area would result in an increase in total runoff volume generated despite the inclusion of stormwater management practices per the NYSSMDM. With increased impervious surface in the project study area, increased runoff volumes from storm events are likely to result. The increase in runoff volume to the ACOE regulated wetland southwest of the Nanuet Train Station was analyzed and

quantified. Refer to Figures EX-1 and PRO-1 as well as hydrologic routing calculations in the Stormwater Runoff Volume Analysis memorandum in Appendix E. A summary of the runoff volume analysis is included in Table 19.

Table 19: Stormwater Runoff Volume Analysis Results

Storm Event	Existing Runoff Volume (ac-ft)	Proposed Runoff Volume (ac-ft)	Volume Increase (ac-ft)	Volume Increase (%)
1-YR	22.734	23.211	0.477	2.10%
10-YR	56.337	57.030	0.693	1.23%
100-YR	119.026	119.860	0.834	0.70%
Notes: Refer to the Stormwater Runoff Volume Analysis Memorandum in Appendix E.				

Higher runoff volumes due to greater impervious surface coverage may affect the hydrologic budget of the adjacent, downstream wetland system resulting in changes to wetland types and vegetation assemblages over time. Such changes may be either adverse (e.g. increased ponding could stress existing wetland vegetation resulting in loss of forested wetland area) or they may be beneficial (e.g. provision of water quality measures upstream where none occur at present may reduce the discharge of nutrient pollutants and sediment currently stressing the wetlands that prevent them from sustaining a diverse assemblage of wetland plants).

Proposed Mitigation

Each development project within the project study area will be required to implement stormwater management practices for stormwater quality treatment and peak flow control. To mitigate for potential wetland hydrologic changes, the Town may consider requiring new developments constructed within the project study area to incorporate infiltration practices that direct some runoff to groundwater thereby lessening changes in surface water runoff volume discharged to downstream wetlands. The Town should also monitor the downstream wetlands during the build-out period to gauge changes to flooding period, flooding heights, water quality, and vegetation assemblage. Results of this monitoring can be used to plan for wetland restoration if affects are shown to be adverse. Lastly, the Town may develop a hydrologic model extending through the downstream wetland system, taking into account its topography and surface water conveyance control structures (pipes/weirs/channels) in order to determine the potential changes to wetland hydrology in advance of development. The results of such modeling can be used to modify the stormwater management requirements in the project study area, if necessary.

The increase in total runoff volume to the ACOE regulated wetland located southwest of the Nanuet Train Station would be expected to be minor (i.e. less than a 3% increase) compared to existing conditions for the 1, 10 and 100 year storm events. As such, significant adverse impacts to the wetland are not anticipated. In any case, mitigation shall consist of wetland monitoring to determine the effects of the increase in impervious area.

In addition, the Town of Clarkstown may consider that redevelopment projects utilize rainfall intensity data that is considerate of changing climate patterns for design of stormwater management practices to ensure future developments are capable of handling increasingly severe storms and to provide additional mitigation of potential wetland impacts.

4.2 Waste/Wastewater (Sanitary Sewer)

Existing Conditions

Water Supply

SUEZ Water New York Inc. provides water service to the Project Study Area. The Suez Water New York Inc. – Water Supply Capacity Report for 2018 dated April 16, 2018 indicates the following with respect to existing water supply:

Table 20: Existing Water Supply

Total Peak Capacity (beginning of 2018)	52.03 MGD
Projected peak demand (end of 2018)	47.2 MGD
Projected growth in 2018	0.08 MGD
Current available peak capacity for growth	4.29 MGD
Annual Average Capacity	
Total Average Capacity (beginning of 2018)	34.49 MGD
Projected average demand (end of 2018)	31.10 MGD
Projected growth in 2018	0.03 MGD
Current available average capacity for growth	3.42 MGD

Existing water mains are proximate to most parcels within the Project Study Area. There are 6-inch diameter mains on the north side of Babcock Avenue, Fisher Avenue, William Avenue, Demarest Avenue, Church Street, the South portion of Orchard Avenue and the West and Prospect Street. There is an eight-inch diameter main on Prospect Street between the 6 inch diameter mains fronting the train station. There is a 20-inch diameter main running along Old Middletown Road/Main Street.

Sanitary Sewer

Public sewer as part of Rockland County Sewer District #1 (RCSD1) currently serves the Project Study Area. Sanitary Sewer lines maintained by RDSD1 and the Town of Clarkstown connect to the Rockland County Sewer Treatment Plant in Orangeburg, NY. According to the Town of Clarkstown Economic Development Strategy (TCEDS) report dated November 2008, the “district has a maximum capacity of 28.9 [MGD], and currently operates at 20-21 [MGD].”

According to “Rockland Tomorrow: Rockland County Comprehensive Plan,” the RCSD1 plant has a design flow and permitted flow capacity of 38.9 MGD (million gallons per day) and the 2009 average flow was 19.6 MGD, 50% of the permitted flow.

According to records provided by Rockland County Sewer District #1, sanitary sewers exist in the public streets within the Project Study Area including Main Street, Prospect Street, Orchard Street, and Fisher Avenue.

Based on the TCEDS 2008 Report and the Rockland County Comprehensive Plan dated March 1, 2011, the RCSD1 treatment plant located in Orangeburg, NY is operating at approximately 70% of its 28.9 MGD capacity. The sewer district is working on reducing wet-weather inflow sources from illegal connections and leaky manholes to control sanitary sewer overflows (SSOs). The District has committed to eliminating wet-weather SSOs for rainfall events up to 3 inches in magnitude.

Potential Impacts

Water Supply

Implementation of the Proposed Action would increase demand on the municipal water system as compared to existing conditions. Domestic water usage rates have been estimated based on water use rates in the NYSDEC Design Standards for Wastewater Treatment Works (2014) as well as projected residential unit counts and retail space square footage for the maximum build-out scenario. The approximate domestic water demand for the Proposed Action at full build-out is presented in the following table:

Table 21: Approximate Domestic Water Demand

Use	Units	Water Use Rate	Average Daily Demand (GPD)	Average Daily Demand with Water Saving Fixtures (20% Reduction when applicable, GPD)
Studio	242	110 GPD/Unit	26,620	21,296
1-Bedroom Units	313	110 GPD/Unit	34,430	27,544
2-Bedroom Units	185	220 GPD/Unit	40,700	32,560
Retail Space	412,777 SF	0.1 GPD/SF	41,278	33,023
Total	-	-	143,028	114,423
Sources: Source: Water Use Rates are referenced to the NYSDEC Design Standards for Wastewater Treatment Works (2014).				

As indicated in Table 21, Project generated average daily water demand is estimated at approximately 0.114 MGD at maximum build-out. Based on available information from the SUEZ Water Supply Capacity Report, the current system has excess capacity to meet the potential demand resulting from the Proposed Action.

Based on correspondence between the Town and Suez on September 20, 2018, Suez confirmed that there is available water to provide service to the Project Study Area. Suez noted that upgrades to the distribution system will be required to mitigate impacts to water pressure for the surrounding community.

It is anticipated that each development application will require a site plan review by the Town of Clarkstown, which will include an evaluation of existing water main capacity with respect to flow and pressure. Water main network improvements to support individual developments would be evaluated as part of the associated site plan review process. Improvements to water mains may be required to facilitate individual developments.

Sanitary Sewer

Per the most recently available data from 2008, the wastewater treatment plant servicing Rockland County Sewer District #1 was not operating at full capacity. As development within RCSD1 in the last 10 years has not been at the scale to utilize the remaining capacity at the treatment plant, adequate capacity at the treatment plant should exist to serve the additional sanitary flow from the Proposed Action.

At full build-out, the Proposed Action would generate an increase in sanitary flow from residential units and retail space, and increase the demand on the existing sanitary sewer network. As presented in Table 21, the sanitary flow facilitated by the Proposed Action at full build-out would be approximately 0.114 MGD, which – when added to the 2008 operating flow of 20-21 MGD would be less than the available capacity at the RCSD1 treatment plant of 28.9 MGD. As such, the Proposed Action will not have any adverse impact to the RCSD1 wastewater treatment plant.

Evaluation of existing sewer main capacity with respect to flow generated by individual development project should be evaluated as part of site plan review for the Proposed Action. Improvements to sewer mains may be required to facilitate individual developments.

Proposed Mitigation

Water Supply

The 2018 SUEZ Water Supply Capacity Report indicates that there is excess capacity to support the development of the Proposed Action

As part of the site plan review process for individual development projects within the Project Study Area, water conservation strategies should be reviewed and encouraged to limit the exacerbation of water supply shortages.

Improvements to the existing water main network may be required of individual developments following a review of project specific impacts during the site plan review process.

Sanitary Sewer

As the RCSD1 treatment plant has available capacity to receive the approximate 0.114 MGD from the Project Study Area, the Proposed Action will not adversely impact sanitary infrastructure. The capacity of existing sanitary sewer main should be evaluated in conjunction with the site plan review of individual developments within the Project Study Area.

Further evaluation of the capacity of each sewer main to serve individual projects should be completed as part of site plan reviews for individual developments within the Project Study Area. This analysis would include existing flow conditions in public sanitary sewers downstream. Analysis may include the installation of flow monitors to determine the existing conditions depth of flow in study area sewer mains. The need for proposed upgrades to sanitary sewer mains to accommodate the additional flow from proposed developments should be reviewed and memorialized as part of the site plan review of each development.

5.0 Impact to Transportation

Chapter 5 addresses potential impacts resulting from the proposed rezoning and the corresponding maximum buildout, to vehicular traffic, parking at the Nanuet Train Station, bicycle/pedestrian traffic, and public transportation ridership. Existing conditions, potential impacts, and proposed mitigations are addressed.

5.1 Vehicular Traffic Study

This Traffic Study assesses the potential traffic and transportation impacts associated with the proposed Nanuet Transit Oriented Development (TOD) zoning amendment (the “Proposed Action”). The Proposed Action would rezone multiple parcels of land approximately bounded by Babcock Avenue to the west, Demarest Avenue to the east, Old Middletown Road to the south and New York Route 59 to the north (the “Project Study Area”). The maximum proposed build out would allow for the development of approximately 759 residential units and 412,777 square feet (SF) of commercial use.

The TIS describes existing conditions within the Project Study Area and assesses future conditions in 2030 both without the Proposed Action (the “No Build” analysis), and with the Proposed Action (the “Build” analysis). The Build analysis analyzes the potential impacts under 2 scenarios: 1) with the existing roadway network and 2) with a new roadway parallel to a portion Main Street.

Capacity Analysis Methodology

The capacity analysis methodology developed for the TIS is as follows.

Signalized Intersections

The operation of signalized intersections in the Project Study Area was analyzed by applying the Percentile Delay Methodology included in the Synchro 10 traffic signal software. This methodology builds on the methodologies presented in the 2010 Highway Capacity Manual (HCM2010) for signalized intersections and evaluates signalized intersections for average control delay per vehicle and level of service (LOS).

LOS can be characterized for the entire intersection, each intersection approach, and each lane group. Control delay alone is used to characterize LOS for the entire intersection or an approach. Control delay and volume-to-capacity (v/c) ratios are used to characterize LOS for a lane group. Delay quantifies the increase in travel time due to traffic signal control. Delay is also a surrogate measure of driver discomfort and fuel consumption. The volume-to-capacity ratio quantifies the degree to which a phase’s capacity is utilized by a lane group.

LOS A describes operation with a control delay of 10 seconds per vehicle or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very

short. If the v/c ratio is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B describes operation with control delay between 10 and 20 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. Also, more vehicles stop at the intersection than with LOS A.

LOS C describes operation with control delay between 20 and 35 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

LOS D describes operation with control delay between 35 and 55 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

LOS E describes operation with control delay between 55 and 80 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. When the LOS is E individual cycle failures are frequent.

LOS F describes operation with control delay exceeding 80 seconds per vehicle or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. When the LOS is F most cycles fail to clear the queue.

A lane group can incur a delay of less than 80 seconds per vehicle when the volume-to-capacity ratio exceeds 1.0. This condition typically occurs when the cycle length is short, the signal progression is favorable, or both. As a result, both the delay and volume-to-capacity ratio are considered when lane group LOS is established. A ratio of 1.0 or more indicates that cycle capacity is fully utilized and represents failure from a capacity perspective (just as delay in excess of 80 seconds per vehicle represents failure from a delay perspective).

The control delay criteria for the range of service levels for signalized intersections are shown in the following table:

Table 22: LOS Criteria for Signalized Intersections

Control Delay Per Vehicle	Level-of-Service (LOS) ⁽¹⁾	
	v/c ratio ≤ 1.0	v/c ratio > 1.0
≤ 10.0 seconds	A	F
>10.0 and ≤ 20.0 seconds	B	F
>20.0 and ≤ 35.0 seconds	C	F
>35.0 and ≤ 55.0 seconds	D	F
>55.0 and ≤ 80.0 seconds	E	F
>80.0 seconds	F	F

Note: (1) For approach-based and intersection-wide assessments, LOS is defined solely by control delay.
Source: Transportation Research Board. 2010 Highway Capacity Manual.

Unsignalized Intersections

LOS for 2-way stop-controlled (TWSC) and all-way stop-controlled (AWSC) intersections are determined by the computed or measured control delay. For motor vehicles, LOS is determined for each minor-street movement (or shared movement), major-street left turns at TWSC intersections and for all movements at AWSC intersections. LOS is not defined for the intersection as a whole for TWSC and AWSC intersections.

The LOS criteria for both TWSC and AWSC unsignalized intersections are summarized in Table 23. Note that the LOS criteria for unsignalized intersections are somewhat different from the criteria used for signalized intersections. At TWSC intersections, drivers on the stop-controlled approaches are required to select gaps in the major-street flow in order to execute crossing or turning maneuvers. In the presence of a queue, each driver on the controlled approach must also use some time to move into the front-of-queue position and prepare to evaluate gaps in the major-street flow. AWSC intersections require drivers on all approaches to stop before proceeding into the intersection.

Table 23: LOS Criteria for Unsignalized Intersections

Control Delay Per Vehicle	Level-of-Service (LOS) ⁽¹⁾	
	v/c ratio ≤ 1.0	v/c ratio > 1.0
≤ 10.0 seconds	A	F
>10.0 and ≤ 15.0 seconds	B	F
>15.0 and ≤ 25.0 seconds	C	F
>25.0 and ≤ 35.0 seconds	D	F
>35.0 and ≤ 50.0 seconds	E	F
>50.0 seconds	F	F

Note: (1) For TWSC intersections, the LOS criteria apply to each lane on a given approach and to each approach on the minor street (for TWSC intersections). LOS is not calculated for major-street approaches or for the intersection as a whole.
Source: Transportation Research Board. 2010 Highway Capacity Manual.

2030 No-Build Assumptions

The Future without the Proposed Action, or No Build, traffic condition is an interim scenario that establishes a future baseline condition without the Proposed Action. The No Build year is the same year as the Build year of the Proposed Action (2030). No Build traffic conditions for each of the traffic impact study are ascertained based on the following procedure:

- Increase the 2018 Existing Conditions traffic volumes by 0.5% per year from 2018 (existing year) to 2030 (build year) for background growth, resulting in an overall growth rate of 6.0%. The use of 0.5% per year was based on the New York Metropolitan Transportation Council (NYMTC) Regional Transportation Plan 2045;
- Include trips from pending developments (No Build projects) located in the vicinity of the Study Area; and
- Considering major roadway improvements in the vicinity of Study Area.

The Clarkstown Planning Office was contacted for a list of pending or proposed development projects in the vicinity of the project site. Currently there are no pending developments necessary for inclusion in the future background conditions.

Based on the most recently published New York State Transportation Improvement Program (TIP), the NYS Route 59 Safety Improvements project planned for completion in 2018/2019 will provide improvements to signal timing, sidewalks, crosswalks and pedestrian signals. In addition, the Project will include a program of integrated transit supportive infrastructure elements (traffic signal and control upgrades, queue jump, ramp metering, and stop station improvements) along the I-287 corridor in Rockland and Westchester Counties.

Existing Conditions

To assess the traffic impacts associated with the Proposed Action, six key intersections that might be affected by Project-generated trips were analyzed (see Figure 7):

1. NYS Route 59 and N. Middletown Road/S. Middletown Road (signalized)
2. Main Street/S. Middletown Road and 1st Street/Market Street (signalized)
3. Main Street and Prospect Street/William Avenue (signalized)
4. Main Street and Orchard Street (unsignalized)
5. Main Street/Old Middletown Road and Church Street (signalized)
6. Prospect Street and Grandview Avenue (unsignalized)

Existing traffic conditions at the six Study Area intersections were established based on traffic counts conducted in January 2018. Manual turning movement counts were collected at all the

Study Area intersections during the weekday morning (7:00 AM – 9:00 AM) and weekday afternoon (3:00 PM – 6:00 PM) peak periods. Data collection sheets are provided in Appendix F.

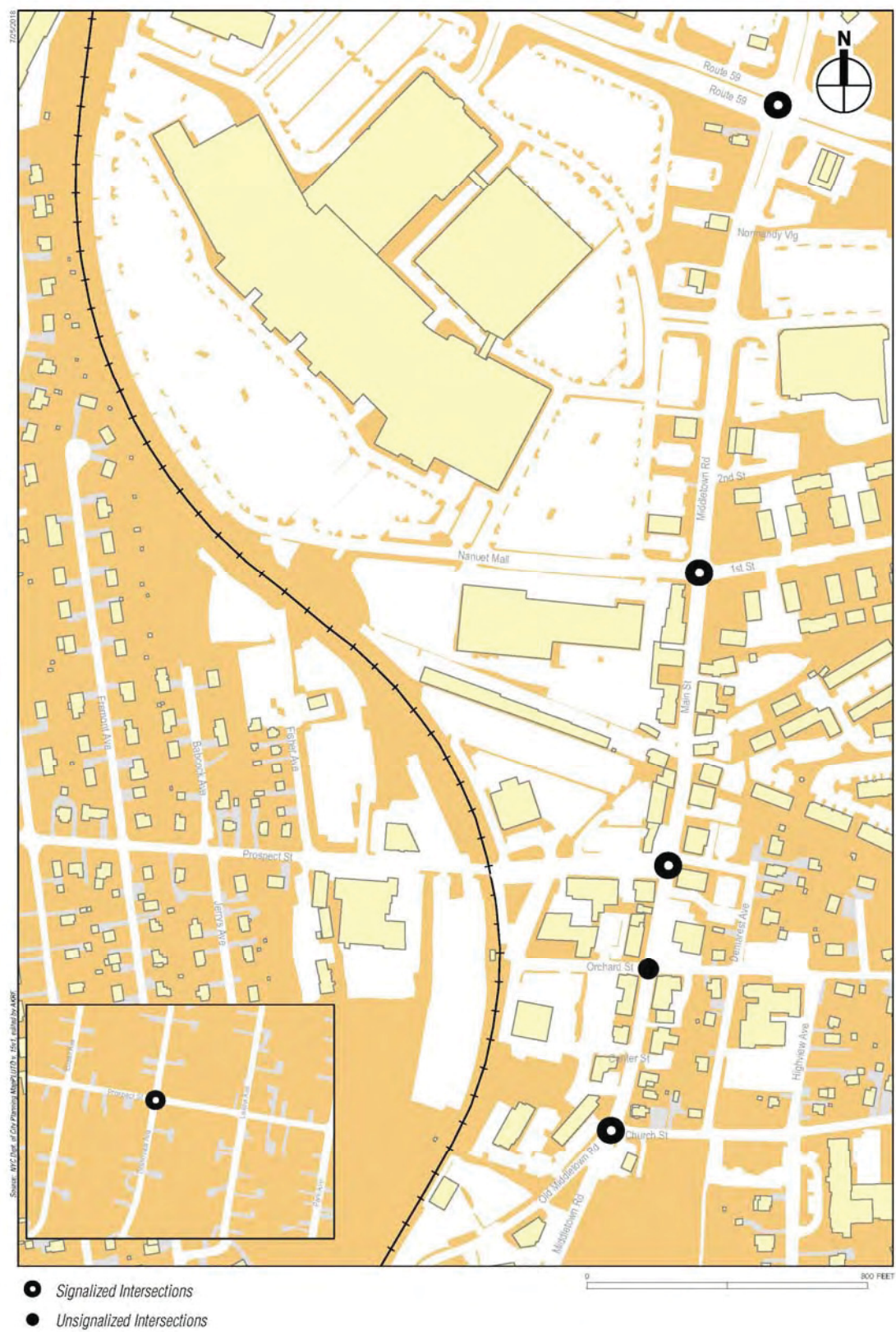
In addition to the manual turning movement counts at Study Area intersections, Automatic Traffic Recorder (ATR) counts were conducted for one full week during January 2018 along Main Street (between Prospect Street and 1st Street) and Prospect Street (between Orchard Street and Main Street). Field inventories of roadway geometry and signal timings/phasing were also conducted to provide the appropriate inputs to the operational analyses. Signal timing plans for the intersection of NYS Route 59 and N. Middletown Road/S. Middletown Road were provided by the New York State Department of Transportation (NYSDOT). Field inventories and traffic signal timing plans are provided in Appendix F.

To assess Study Area parking conditions, on-street and off-street parking utilization data were collected at the following on-street and off-street facilities:

1. Main Street, between 1st Street and Church Street
2. Orchard Street, between Prospect Street and Main Street
3. Clarkstown Commuter Parking Lot (also referred to as Parking Lot #1)
4. Rockland County Commuter Parking Lot (also referred to as Parking Lot #2)
5. MTA Metro-North Parking Lot (also referred to as Parking Lot #3)

Parking utilization was collected in January 2018 during the weekday morning (7:00 AM to 9:00 PM), weekday midday (12:00 PM to 2:00 PM) and weekday afternoon (4:00 PM to 8:00 PM). Data collection sheets are provided in Appendix F.

Figure 7: Project Study Area Analyzed Intersections



Roadway Characteristics

The following is a brief description of the major roadways within the Project Study Area:

NYS Route 59

NYS Route 59 is an east-west roadway under the jurisdiction of NYSDOT and is classified by NYSDOT as a principal arterial. NYS Route 59 generally provides 3 moving lanes in each direction with additional turning lanes at major intersections. Within the Project Study Area, Route 59 varies in width between approximately 96 and 114 feet and pavement markings include crosswalks, stop lines, and exclusive turn lane markings. On-street parking is prohibited along NYS Route 59. There are no public bus stops along NYS Route 59 within the immediate vicinity of its intersection with Middletown Road, however there are bus shelters east on NYS Route 59 at College Avenue and west at the Shops at Nanuet and Rockland Plaza serviced by Rockland's local bus system Transport of Rockland (TOR). Traffic control along NYS Route 59 in the Study Area includes a traffic signal at its intersection with N. Middletown Road/S. Middletown Road. Pedestrian facilities are provided along NYS Route 59 including sidewalks and crosswalks.

Main Street

Main Street is a north-south roadway under the jurisdiction of Rockland County and is classified by NYSDOT as a minor arterial. Main Street is generally one lane in either direction with turning lanes and areas of on-street parking except in the segment between 1st Street and NYS Route 59 which generally has 2 lanes in either direction and turning lanes without on-street parking. Within the Study Area, pavement markings along Main Street include exclusive turn lane markings, crosswalks, stop lines, and striping for parking areas. The width of Main Street varies from 36 to 80 feet. On street parking is permitted for certain areas between Church Street to 1st Street. There is a public bus stop located on the west side of Main Street just south of the intersection with Prospect Street which is serviced by the Clarkstown Mini-Trans bus system. Traffic control along Main Street within the Study Area includes traffic signals at its intersection with NYS Route 59, First Street, Prospect Street, and Church Street. The pedestrian facilities provided along Main Street within the Study Area include continuous sidewalks and crosswalks at its intersections with NYS Route 59, First Street, Prospect Street, and Church Street.

Prospect Street

Prospect Street is classified by NYSDOT as a major collector. It traverses the Study Area in an east-west direction and is under the jurisdiction of the Town of Clarkstown. Prospect Street generally provides one moving lane in each direction and varies in width between 20 and 40 feet. Pavement markings along Prospect Street include stop lines, railroad crossing indications, sidewalks, delineation of a pedestrian walkway for the break in sidewalk along the south side of Prospect Street from approximately Fisher Avenue to the railroad tracks and a mid-block crosswalk at the MTA parking lot across Prospect Street. There are no public bus stops along Prospect Street and on-street parking is not permitted along Prospect with the exception of

approximately 3 spaces on the south side of Prospect Street just west of the intersection with Main Street. Traffic controls along Prospect Street include a traffic signal at its intersection with Main Street and stop signs at its intersection with Grandview Avenue. Pedestrian facilities provided along Prospect Street include sidewalks, pedestrian walkways and crosswalks at the MTA parking lot and its intersection with Main Street.

1st Street

1st Street is an east-west roadway and is classified by NYSDOT as a major collector. It is under the jurisdiction of Town of Clarkstown and generally provides one moving lane in each direction with turning lanes. 1st Street is approximately 37 feet wide and provides exclusive turn lane markings, stop lines and crosswalks at the intersection of Main Street. There are no bus stops along 1st Street and on-street parking is not permitted. Although parking is not permitted, 1st Street does contain a pull-off area where pick-ups and drop-offs are permitted. The traffic control along 1st Street within the study area includes a traffic signal at Main Street. In addition, sidewalks are provided along both sides of 1st Street.

Church Street

Church Street is classified by NYSDOT as a minor arterial and within the Study Area, it traverses in the east-west direction. It is under the jurisdiction of Town of Clarkstown. Within the Study Area, Church Street provides one moving lane in both directions and is approximately 24 feet wide. Pavement marking along Church Street include stop lines and crosswalks. On-street parking is prohibited and there is no public bus stop along Church Street. Within the Study Area, traffic controls along Church Street include a traffic signal at its intersection with Main Street and a sidewalk is provided along the south side of Church Street just east of the intersection.

Grandview Avenue

Grandview Avenue is a north-south roadway and is classified by NYSDOT as a major collector. It is under the jurisdiction of Town of Clarkstown. Within the Study Area, Grandview Avenue provides one moving lane in each direction and is approximately 24 feet wide absent any pavement markings except stop lines. On-street parking is prohibited and there are no public bus stops or pedestrian facilities provided along Grandview Avenue.

Orchard Street

Orchard Street is classified by NYSDOT as a local roadway and generally traverses in an east-west direction within the Study Area. It is under the jurisdiction of Town of Clarkstown. Orchard Street provides one moving lane in each direction and varies between 24 feet and 34 feet wide. Pavement markings along Orchard Street are limited to stop lines and crosswalks at the intersection with Main Street. On-street parking is permitted along sections of Orchard Street. Orchard Street is stop controlled at its intersection with Main Street. There are no public bus stops or pedestrian facilities provided along Orchard Street.

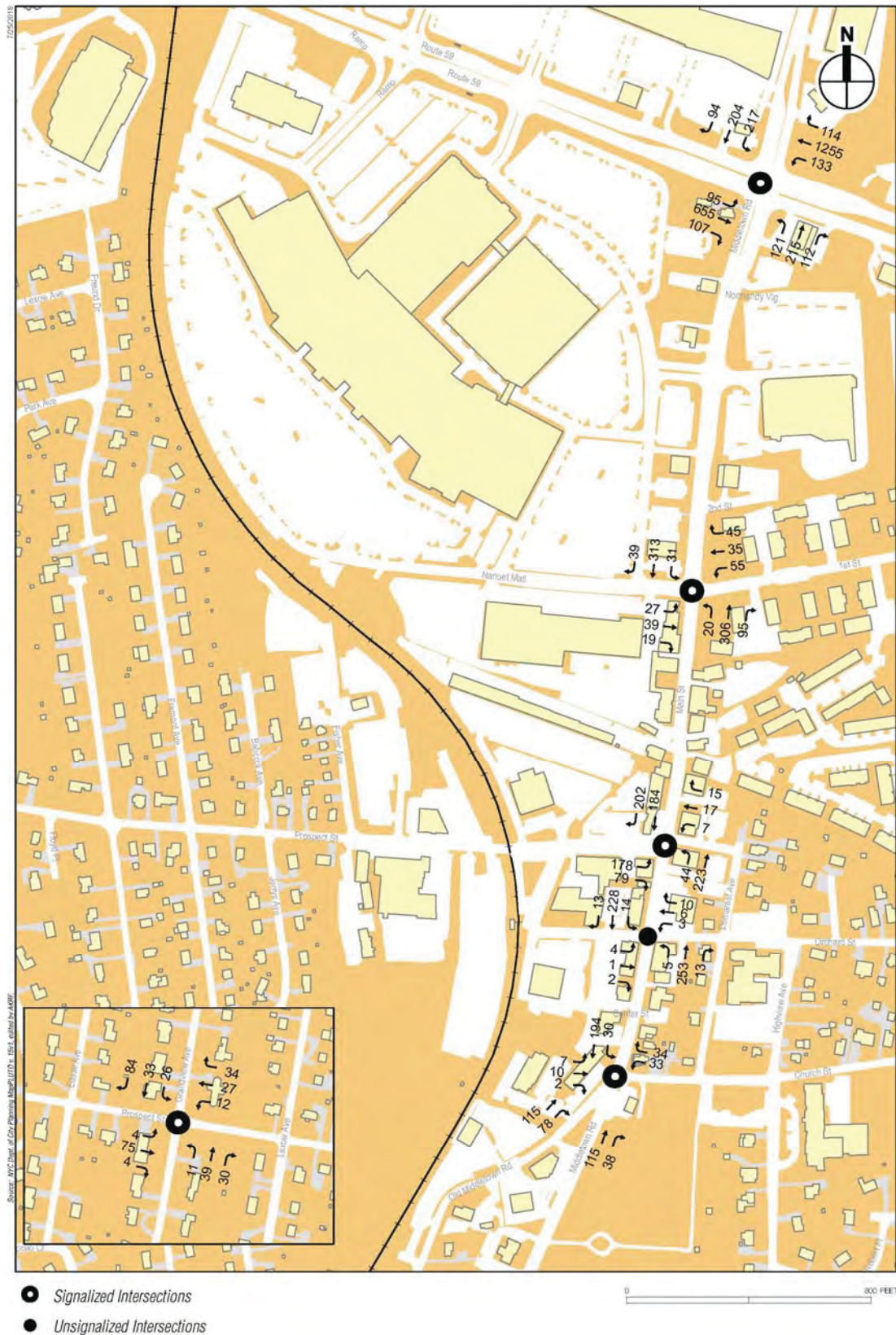
Old Middletown Road

Old Middletown Road is a north-south roadway that is classified by NYSDOT as a minor arterial. It is under the jurisdiction of Rockland County. Old Middletown Road provides one moving lane in each direction. There are no bus stops or pedestrian facilities and on-street parking is prohibited along Old Middletown Road. Old Middletown Road is controlled by a traffic signal at its intersection with Church Street.

Existing Traffic Conditions

Based on a review of all the traffic count data, the peak hours for the Study Area were determined to be 7:30 AM to 8:30 AM and 5:00 PM to 6:00 PM for the weekday morning and afternoon peak hours, respectively. Traffic volumes for the 2018 Existing Conditions peak hours analyzed are presented in Figures 8 and 9 and Table 24.

Figure 8: 2018 Existing Morning Peak Hour Traffic Conditions



Map of the City of Pasadena

Legend:

- Signalized Intersections
- Unsignalized Intersections

Scale: 0 to 800 Feet

Traffic operating conditions at each Study Area intersection were analyzed using the Synchro 10 Percentile delay and HCM2010 methodology (see Appendix F for Synchro 10 outputs for all Study Area intersections) to compute delays, v/c ratios, and LOS as described above.

Table 24: Existing Conditions LOS Analysis

Intersection	Weekday AM				Weekday PM			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Signalized Intersections								
NYS Route 59 & N. Middletown/S. Middletown Road								
Eastbound	L	0.39	47.1	D	L	0.59	48.4	D
	TR	0.53	28.4	C	TR	0.73	35.0	D
Westbound	L	0.44	44.9	D	L	0.52	48.0	D
	T	0.71	29.2	C	T	1.25	149.7	F
Northbound	R	0.20	24.8	C	R	0.64	38.8	D
	L	0.63	52.2	D	L	0.65	53.6	D
	T	0.60	46.0	D	T	0.64	46.8	D
	R	0.38	19.3	B	R	0.30	17.3	B
Southbound	L	0.42	36.1	D	L	0.44	39.3	D
	TR	0.61	41.0	D	TR	0.83	52.1	D
Intersection		33.2		C	Intersection		82.0	F
Main Street & 1st Street/ Market Street								
Eastbound	L	0.16	29.9	C	L	0.43	28.1	C
	T	0.27	43.3	D	T	0.27	35.4	D
Westbound	R	0.10	30.6	C	R	0.19	25.1	C
	L	0.23	29.9	C	L	0.20	24.1	C
Northbound	TR	0.45	47.4	D	TR	0.82	63.2	E
	L	0.04	3.9	A	L	0.12	8.2	A
Southbound	TR	0.41	9.1	A	TR	0.42	17.3	B
	L	0.06	7.8	A	L	0.13	11.3	B
	T	0.30	13.1	B	T	0.49	22.5	C
	R	0.04	6.9	A	R	0.09	8.6	A
Intersection		16.4		B	Intersection		27.6	C
Main Street & Prospect Street / William Avenue								
Eastbound	L	0.74	52.0	D	L	0.62	47.5	D
	R	0.26	7.9	A	R	0.44	9.2	A
Westbound	LTR	0.12	29.7	C	LTR	0.15	33.5	C
Northbound	LT	0.22	9.5	A	LT	0.27	6.3	A
Southbound	TR	0.37	4.6	A	TR	0.42	4.6	A
Intersection		16.8		B	Intersection		12.4	B
Old Middletown Road & Main Street & Church Street/ Driveway								
Eastbound	LTR	0.20	46.4	D	LTR	0.31	48.6	D
Westbound	LTR	0.34	5.4	A	LTR	0.63	23.1	C
Northbound	T	0.14	13.7	B	T	0.22	15.7	B
	R	0.06	14.1	B	R	0.13	15.3	B
Northeastbound	LR	0.74	54.8	D	LR	0.75	55.4	E
Southbound	L	0.05	10.5	B	L	0.09	13.4	B
	T	0.20	10.1	B	T	0.38	14.9	B
Intersection		24.6		C	Intersection		24.9	C
Unsignalized Intersections								
Grandview Avenue & Prospect Street								
Eastbound	L	0.13	8.4	A	L	0.13	8.6	A
Westbound	L	0.10	8.0	A	L	0.22	8.8	A
Northbound	L	0.12	8.0	A	L	0.15	8.5	A
Southbound	L	0.21	8.3	A	L	0.26	9.5	A
Main Street & Orchard Street W / Orchard Street								
Eastbound	L	0.02	13.0	B	L	0.06	15.1	C
Westbound	L	0.04	12.1	B	L	0.06	17.1	C
Northbound	L	0.00	7.8	A	L	0.00	8.2	A
	T	0.00	0.0	A	T	0.00	0.0	A
Southbound	L	0.01	7.9	A	L	0.04	8.1	A
	T	0.00	0.0	A	T	0.00	0.0	A
Notes: L = Left Turn, T = Through, R = Right Turn, LOS = Level of Service								
= Indicates poor operating conditions.								

During peak hours, LOS D operations are generally considered to be acceptable operating conditions for signalized and unsignalized intersections. As shown in Table 24, most of the Study Area intersection lane groups/approaches operate better than LOS D under 2018 Existing Conditions during the peak hours analyzed with the following exception:

- NYS Route 59 and N. Middletown/S. Middletown Road—The westbound through movement operates at LOS F during the weekday PM peak hour;
- Main Street and 1st Street/ Market Street—The westbound shared through/right-turn movement operates at LOS E during the weekday PM peak hour; and
- Main Street/Old Middletown Road and Church Street—The northeast-bound (Old Middletown Road) approach operates at LOS E during the weekday PM peak hour.

2030 No Build Traffic Conditions

Traffic volumes for the 2030 No Build Condition for the weekday AM and PM peak hours analyzed are shown in Figures 10 and 11, respectively. Table 25 presents a comparison of the 2018 Existing and 2030 No Build LOS conditions for the Study Area intersections for the weekday AM and PM peak hours. Synchro 10 outputs for the 2030 No Build scenario are provided in Appendix F.

Under the 2030 No Build conditions, the following notable changes in LOS would occur for the Study Area intersections:

- NYS Route 59 and N. Middletown/S. Middletown Road—The westbound through movement would decrease within LOS F (from 149.7 spv to 187.1 spv) during the weekday PM peak hour; and
- Old Middletown Road/Main Street and Church Street—The north-eastbound approach decreases from LOS D to LOS E during the weekday AM peak hour.

LOS E and LOS F generally indicate congested conditions and notable delays.

Figure 10: 2030 No-Build Morning Peak Hour Traffic Conditions

